

REMARKS

Claims 8, 9 and 11-14 have been canceled, and new claims 21-23 have been added. No new mater was added. Thus, claims 1, 2, 7, 10 and 15-23 remain pending. Independent claims 1 and 15 have been amended to distinguish over the prior art of record. Accordingly, Applicants respectfully submit that the present application is in condition for allowance.

I. Claim Rejections - 35 USC §103(a)

In the FINAL Office Action dated June 22, 2010, claims 1, 2 and 7-18 are rejected under 35 USC §103(a) as being obvious over JP 2002-208125.

JP ‘125

Newly applied JP ‘125 discloses a target material produced by melting, casting and hot rolling. JP ‘125 requires the target to have an iron (Fe) content of 50ppm or less (see claim 8 and Paragraph Nos. 0011 and 0022 of JP ‘125) because “the membrane property deteriorates when Fe exceeds 50ppm”. JP ‘125 also requires the target to have an average crystal grain size of 40µm or less (see claim 6 and Paragraph Nos. 0011 and 0019 of JP ‘125) “to reduce magnetic property dispersion such as the magnetic property of the magnetic membrane of the Co-Cr-Pt system sputtering membrane including the coercitivity and squareness ratio”.

In the Office Action, it is stated that JP ‘125 discloses the use of hot rolling at 25% to one of ordinary skill in the art. For the reasons stated below, Applicants respectfully submit that JP ‘125 actually teaches away from the use of a hot rolling ratio of 25% as well as a hot rolling ratio required and claimed by the present application.

The only disclosure of the use of a 25% rolling rate is with respect to “Samples 6-10”. See Paragraph No. 0023 of JP ‘125. In contrast, “Samples 1-5” (Paragraph No. 0023) and “Samples 16-25” (Paragraph No. 0030) require a rolling rate of 50% which is clearly above that

required by the claims of the present application. No hot rolling was used for “Samples 11-15” (Paragraph No. 0023).

With respect to Samples 6-10 of JP ‘125, Table 1 (Paragraph 0027 of JP ‘125) clearly indicates that these samples have an average crystal diameter of $51\mu\text{m}$ and Fe content of 76ppm. Both of these values are outside the limits required by JP ‘125. For instance, as discussed above, JP ‘125 requires the target to have an iron (Fe) content of 50ppm or less because “the membrane property deteriorates when Fe exceeds 50ppm”, and JP ‘125 requires the target to have an average crystal grain size of $40\mu\text{m}$ or less “to reduce magnetic property dispersion such as the magnetic property of the magnetic membrane of the Co-Cr-Pt system sputtering membrane including the coercitivity and squareness ratio”. Thus, Samples 6-10 represent samples that are taught away from by JP ‘125. JP ‘125 teaches to one of ordinary skill in the art that the Samples meeting the conditions required by JP ‘125 are rolled at a rolling rate of 50%, not 25%.

Further, JP ‘125 teaches that “no recrystallization occurs if it (rolling rate) is too low”. See Paragraph No. 0020 of JP ‘125. Thus, the samples 1-5 and 16-25 possessing the characteristics required by JP ‘125 are rolled at a rolling rate of 50%, not 25%. Only those samples not meeting the requirements of JP ‘125 (i.e. so called comparative examples that demonstrate what not to do) utilize a “too low” rolling rate of 25%. Thus, one of ordinary skill in the art is not taught by JP ‘125 to use a low rolling rate of 25%; rather, one of ordinary skill in the art is taught that the rolling rate must be 50%.

Teaching away is the antithesis of the art suggesting that the person of ordinary skill in the art go in the claimed direction. Essentially, teaching away is a per se demonstration of lack of obviousness. In re Fine, 873 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Further, Samples 6-10 of JP ‘125 include B content of 5at% which is well below that required by the claims of the present application. Thus, the only Samples of JP ‘125 rolled at a

rolling rate of 25% did not contain the required amount of B as claimed in the present application. Thus, the combination of limitations required by the claims of the present application are not fairly disclosed, taught or suggested to one of ordinary skill in the art by JP ‘125.

In addition, the following conclusion is stated in the FINAL Office Action:

“Although Ueno does not specifically disclose that his sputtering targets have the claimed microstructure, it would have been obvious to one of ordinary skill in sputtering targets, at the time of the invention, to have produced the instant sputtering targets as Ueno disclosed a substantially similar alloy composition (overlapping contents of Cr, Pt, B and Co) produced by a substantially similar process of casting, heat treatment, and rolling. Moreover, one of ordinary skill in the art would have reasonably expected the sputtering targets to possess the claimed microstructure for the reasons stated above as where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical process, a *prima facie* case of either anticipation or obviousness has been established.”

Applicants respectfully disagree with the above conclusion and respectfully submit that one of ordinary skill in the art would not expect the claimed microstructure of the present application to be the same or similar to that required by JP ‘125. This is because the targets are not produced by a similar process. Reconsideration is respectfully requested.

With respect to metal materials, their alloy structures and characteristics are determined by both the chemical composition and the processing conditions (including heat treatment, rolling rate, etc.). Consequently, the composition and characteristics of two metal materials can be determined to be identical only when both their chemical composition and specific processing conditions are the same.

The present invention produces the claimed microstructure via hot rolling at a rolling rate of 15 to 40%. In contrast, as discussed above, JP ‘125 directs one of ordinary skill in the art to use a rolling rate of 50%, not 25%. A rolling rate of 25% is only used by JP ‘125 with respect to samples that did not comply with the requirements of JP ‘125 and represent samples to one of

ordinary skill in the art that should be avoided according to the teachings of JP '125, including the use of a "too low" rolling rate of 25%.

Accordingly, Applicants respectfully submit that one of ordinary skill in the art would not find it obvious to use a rolling rate within 15 to 40% and therefore, would have no common sense expectation that the microstructure produced according to JP '125 would be identical or similar to that required by the claims of the present application.

For all the above reasons, Applicants respectfully submit that claims 1, 2, 7, 10 and 15-18 are not obvious in view of JP '125. Accordingly, Applicants respectfully request careful reconsideration and removal of the above referenced rejection.

II. Allowable Subject Matter

Applicants note that claims 19 and 20 have been found to recite patentable subject matter. Applicants respectfully submit that claims 22 and 23 are allowable for similar reasons. No new matter was added.

III. Conclusion

In view of the above amendments and remarks, Applicants respectfully submit that the claim rejections have been overcome and that the present application is in condition for allowance. Thus, a favorable action on the merits is therefore requested.

Please charge any deficiency or credit any overpayment for entering this Amendment to our deposit account no. 08-3040.

Respectfully submitted,
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